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DOI:

[10.1080/13669877.2018.1460391](https://doi.org/10.1080/13669877.2018.1460391)

*Document Version*

Peer reviewed version

[Link to publication record in King's Research Portal](#)

*Citation for published version (APA):*

Lofstedt, R. (2018). Transparency at the Swedish Forest Agency: What does the evidence show? . *Journal of Risk Research*. <https://doi.org/10.1080/13669877.2018.1460391>

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# **Transparency at the Swedish Forest Agency: What does the evidence show?**

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## **Abstract**

Since February 2016 the Swedish Forest Agency (hereafter the ‘Agency’) has uploaded all requests for clear cuts on its Forest Data web-portal, which includes detailed forest maps which can be magnified online in order to pinpoint exactly where the clear cut is expected to take place (*see* <https://skogskartan.skogsstyrelsen.se/skogskartan>). The reason for doing so is to simplify the work of the Agency, as well as to assist forest and energy companies, environmental organizations and other bodies to get access to relevant information. In addition, the Agency believes that greater transparency will lead to more public trust and greater public understanding of the Swedish forest sector. In this study evaluating the Agency’s transparency measure, it was uncovered that a majority of the Forest Agency’s board members and senior executives were in favour of the Agency’s transparency measures, something that a majority of the public interviewed also agreed with. Forest owners, however, had exactly the opposite view. That said, it is unclear whether the recently improved transparency measures will actually lead to greater public trust and knowledge of the Swedish forestry model. As most Swedes are unaware of how the Swedish forestry production model actually works, they will most likely be opposed to clear cuts if they found out that this was the main method for harvesting mature tree stands. Hence, the Agency’s transparency measures may actually decrease public trust in the forestry sector rather than anything else.

## **1. Introduction**

Since February 2016 the Swedish Forest Agency (hereafter the ‘Agency’) has uploaded all requests for clear cuts on its Forest Data web-portal, which includes detailed forest maps which can be magnified online in order to pinpoint exactly where the clear cut is expected to take place (*see* <https://skogskartan.skogsstyrelsen.se/skogskartan>). The reason for doing so is to simplify the work of the Agency, as well as to assist forest and energy companies, environmental organizations and other bodies to get access to relevant information (Sundqvist 2016). In addition, the Agency believes that

greater transparency will lead to more public trust and greater public understanding of the Swedish forest sector (Andre 2016a and b). At the same time, individual forest owners have complained that they have not been informed that their personal forest information is now available online and in the public domain, allowing various actors and organizations to view their forestry data, something that Sweden's forest owner organizations oppose such as Sodra (Hammar et al 2016). This is an important issue as it is yet another example of full disclosure or "data dumping" transparency: that is put the data, in this case detailed forest clear cutting maps in the public domain, without any explanations of what exactly these maps actually show. To date past data dumping activities have led to confused publics, greater stakeholder and public distrust of government agencies, with little actual gain (reputational or otherwise) for the organization in question who triggered the transparency measure in the first place (eg Boudier et al 2015; CEO 2013; Lofstedt and Boudier 2014; Way 2017).

The aims of this paper are four fold:

- To investigate how the Agency works strategically with transparency;
- To uncover the possible intended (and unintended) consequences of the Forest Agency's actions in this area;
- To find out how a number of actors engaged with the forestry sector view these recent transparency measures; and
- Finally, to generate recommendations on what the Agency and other related forest bodies should do next in the transparency space.

This paper achieves these goals by having a number elite interviews with officials at the Agency and members of the Agency's board, face to face interviews with forest owners and surveying the general public (for a detailed description see the methodology section). This paper is structured as followed: First an explanation of the Swedish forest model is provided. This is done as much of the controversy between the various forest interests has been generated by the applications of this model. Second, a brief history of transparency policies within the forest sector is given. Third, a literature over view of the transparency literature is described. Fourth, an overview of the research methodology is outlined. Fifth, the findings of the study are discussed, including a description of the Sodra-Swedish Forest Agency case, as well the results from the various interviews and survey. Sixth, the findings are analyzed. In the penultimate section, a number of recommendations are provided on what the Agency can do now going forward and then finally there is a brief conclusion.

### **1.1 The Swedish Forest Model**

At the end of the 19<sup>th</sup> century the Swedish woods were in a sparse and neglected state. Large parts of the forests in northern Sweden had been clear cut and not

replanted for the growing sawmill sector, while in southern Sweden farm animals had been allowed to graze the forests and in so doing damaging young saplings. In 1903 the Swedish state passed a law ensuring that forest owners had to replant their clear cuts. In part because of the sparse woods the forest owners adopted a selective cutting method which is common place in countries such as Germany. This changed in the 1950s when the forest management regime moved to clear cuttings in order to help accommodate the needs of the forest industry (Axelsson and Ostlund 2011; Petersson 2005). As part of this new forest regime active management became the norm. Forest owners became engaged with seedling planting, ditching of moist soils, use of genetically improved seedlings initially grown in greenhouses, brush clearance and thinning (Lindahl et al 2017). In some parts of Sweden, especially in corporate woods up in the north, huge areas were clear cut causing protests from environmental NGOs, leading in part to the passage of the 1974 Forestry Act requiring forest owners to notify the Forest Agency before doing a clear cut. The biggest change to the Swedish forest regime came after the passage of the 1993 Forestry Act in which the environmental values were given equal weighting to economic ones. With this Act the forest owner him/herself got more responsibility in actively managing his/her forests (Appelstrand 2012; Lidskog and Lofmark 2016). In the post 1993 era one is not allowed to completely clear cut a forest plot. Rather on average a forest owner sets aside 8 percent of the proposed clear cut for certain environmental and/or cultural reasons (so called retention forestry where valuable trees such as oaks are preserved) (Andre 2017; Royal Swedish Academy of Agriculture and Forestry 2009 and 2017; Swedish Government 2013). As a result, official statistics show that several features favoring biodiversity is increasing after 1993, such as volume of dead wood, area of old forests and broadleaved forests (Royal Swedish Academy of Agriculture and Forestry 2012). That said, its effect on biodiversity remains to be evaluated.

The Swedish forest owners as well as forest cooperatives such as Sodra are themselves also very active in the environmental space. Sodra's pulp mills, for example, are run on renewable energy sources based on waste products (such as bark), and these mills today run energy surpluses which are sold to the national grid and into district heating systems. Sodra was also the first large commercial pulp company in the world to move from elementary chlorine free (ECF) pulp to total chlorine free pulp (TCF) in the 1990s (Ekheimer 1991). In addition, most of the forest owners have joined certification schemes such as the Forest Stewardship Council (FSC) which ensures that the forest management schemes are both renewable (so for every tree that is cut down four are planted in its place) as well as sustainable—including the forest owners setting aside a minimum of 5 percent of their productive forests as nature reserves (FSC 2018).

## **2. History of transparency policies within the Swedish forest sector**

The 1974 Swedish Forestry Act required forest owners to notify the Swedish Forest Agency before clear cutting a plot greater than 0.5 hectares (see also Nylund 2009). The law was introduced to give the Agency the opportunity to assess the environmental implications of proposed clear cuts and, when needed, recommend any measures to protect the environment before proceeding or to stop the suggested clear cut from taking place (Eckerberg 1990; Swedish Government Bill 1974; 1978). These notifications were in the public domain so anyone can contact the Forest Agency and request copies (Eckerberg 1990). Since 1980 most Swedish forest owners have forest management plans which are renewed every ten years (Swedish Forest Agency 1987). The more advanced forest management plans contain detailed maps of the age of the trees and suggestions of measures that should be undertaken in each of the computer generated plots that make up the plan (such as brush clearing, sapling planting, and clear cutting).

Since 2007 the Agency has uploaded elements of all requests for clear cuts online as part of its digital modernization strategy (Andre 2017). The reason for moving into the digital age was in part driven by the need to help spruce and pine sapling trucks (and tree planters) find the correct locations to offload such saplings after the January 2005 hurricane called Gudrun which flattened 75 million cubic meters of primarily spruce trees in southern Sweden. At the time, vast areas of woods in southern Sweden had been felled and individuals working in the forestry sector became easily disoriented. In February 2016 the Agency made further changes when, as part of its Forest Data web-portal, it added to the application (but not with name and address of an applicant) a forest map that can be magnified to pinpoint exactly where the clear cut is planned to take place (*see* <https://skogskartan.skogsstyrelsen.se/skogskartan/> ). When the Forest Agency launched its new service, it was accompanied by a press release with the title:

*“Now everyone can see requests for clear cuts”* (Forest Agency 2016).

## **3. Literature review-transparency**

The Swedish Forest Agency is not the first government body that has taken the view that enhancing transparency will lead to greater public understanding and trust. The European Food Safety Authority (EFSA) and the European Medicines Agency (EMA) have taken similar views in the recent past (e.g. see Lofstedt 2013; Lofstedt and Boudier 2014; Way and Lofstedt 2018). What is equally interesting is that these Agencies, just like the Swedish Forest Agency, have no evidence that their transparency measures will achieve these highly desirable goals (Way 2017). In other words, they are making statements grounded more in politics and good intentions rather than backed up by

scientific evidence. They have not done an academic peer reviewed study to find out how the general public as a whole would react to these measures let alone any form of pretesting or evaluation (Way 2017). A Dutch study (Bijker et al 2009), for example, showed that the more transparent regulators and authorities became, the more the public saw how policymakers actually made decisions by apparently muddling through and bickering throughout the decision-making process, the more disenchanted they became with it (see also Bovens and Wille 2008; Grimmelikhuijsen 2010; Roberts 2006). In other words, the supposed trustworthiness of policy makers and regulators were more or less based on pre-existing views of how the Government operates. However, as citizens gained more information (and hence more knowledge) about how Government actually operates in practice, the more negative their views of government became (see also Mondak et al 2007). In another study Coglianese 2009 argued that emphasizing so-called “fishbowl” transparency, commonly called full-disclosure transparency or simply data dumping, over “reasoned” transparency may raise expectations in the eyes of the public and other stakeholders that simply cannot be realized, leading to credibility problems. Finally, De Fine Licht et al argue that although transparency has the potential to help publics and other stakeholders better understand risk regulation (De Fine Licht et al 2014), which is the same argument used by the Forest Agency, this too can backfire as these transparency measures in turn can, in turn, show how little influence the public and other observers actually have ((Ulbig 2008). As Ulbig argues:

“Voice with little influence produces more negative reactions than no voice” (Ulbig 2008,p. 525).

Christopher Hood summarizes the conundrums associated with transparency when he notes:

“Attempts to create more transparency will not necessarily do so, and if they do may create side effects.” (Hood 2001, p. 703)

Similarly, in studies conducted in the pharmaceutical sector by the author and colleagues, from King’s College London and Maastricht University collaborations, the authors repeatedly found, that although the public would in general welcome greater transparency with regard to drug safety issues, once they found out about the side effects of certain drugs many became unduly worried. In these studies (N=approximately 11,000 members of the European public) the authors saw that in some cases a majority of the European publics would stop taking their medication (e.g. Germany and Spain) and in other cases they would actively seek to get more information before continuing to take their medication (including Netherlands, Sweden and the UK) (see Boudier et al 2015; Lofstedt et al 2013; Lofstedt and Way 2016a and b; Way et al 2016). EMA was not expecting these unwanted and unintended consequences of worried European citizens caused by its transparency measures. The studies also

showed that many of the unwanted effects were not identified by EMA because the consequences were both counter-intuitive as well as because they did not empirically evaluate their policies.

The Swedish Forest Agency is most likely correct in that the new transparency measures will help other external bodies looking into forest clear cut applications. Yet the Agency's policy could also have serious unwanted consequences. As Baroness Onora O'Neill once argued:

“Transparency requirements can benefit expert ‘outsiders’ by enabling them to access information about the performance of institutions and their office holders. This is particularly helpful to expert critics of government, business, and professional performance. Expert critics often have the time and the ability to grasp and use information in ways the wider public does not. Transparency is therefore particularly useful to the media and to campaigning organizations which can discover information that bears on others’ performance (while they themselves are generally exempt from the like transparency requirements) (O’Neill 2006, p.88).

As O’Neil would most likely hypothesized the Swedish Forest Agency’s transparency measures can assist environmental NGOs and other bodies active in the forestry sector. Such actions have been seen in other sectors. For example, when EFSA put more information into the public domain in the name of transparency (such as conflict of interest statements) the data was, in turn, used by critics of the Agency against the Agency itself. For example, the Corporate European Observatory (CEO), a non-profit research and campaign group, argued that EFSA should become more transparent noting:

“Transparency isn’t only needed to improve public confidence in EFSA’s work but also to ensure EFSA’s assessments are based on sound science.” (CEO 2013).

Yet at the same time CEO used the information that EFSA released against them. As in one report from 2012, CEO noted:

“Too often it’s not independent science that underlies EFSA decisions about our food safety, but industry data. EFSA panels base their scientific opinions on risky products like pesticides and GMOs largely on industry-sponsored studies. EFSA has often been found to ignore independent research for unscientific reasons. The agency has issued controversial guidelines for the assessment of pesticides and GMOs that benefit industry, not the public interest. In some cases EFSA even copies wording from industry sources.” (CEO 2012, p.3)

These types of attacks will not increase public trust as CEO noted above, rather it will lead to greater public distrust. In addition, it is likely that such NGO

attacks will not diminish with increased transparency. On the contrary theoretical and empirical research shows that it is almost inevitably going to get worse (Manson and O'Neill 2007; Vos 2009).

Based on this literature review the following research questions were developed:

- Will the Forest Agency's data dumping activities with regard to the placement of detailed forest maps on the Forest data portal lead to greater stakeholder and public trust and help inform the Swedish public regarding what exactly is the Swedish forestry model?
- Will there be differences between the different actors? Will some bodies be more in favor of the Agency's transparency measures and others more critical?
- Will any of the bodies interviewed see any down sides of what the Agency is doing in this area, considering the fact that transparency is a present day very popular "mega trend"?

#### **4. Research methodology**

To help address the above questions a mixed-methods methodology was used consisting of in-depth interviews and surveys: a) two 45 minute telephone interviews with senior representatives at the Swedish Forest Agency. b) Two 30 minute telephone interviews with board members of the same Agency. c) One 90 minute face to face interview with a senior representative of the Swedish Society for Nature Conservation. d) Ten 15 minute to one hour long face to face interviews with forest owners in Smaland, Sweden. These interviews took place either in the forest or in the comfort of their own homes. e) Four face-to-face interviews with members of the Swedish parliament working on forestry related issues; f) These interviews were also complemented by 100 face-to-face interviews which were conducted with members of the general public. The sample were all adults from Vaxjo in the province of Smaland some 400 kilometers south of Stockholm. The town itself is surrounded by dense forests. The interviews took place between the 21<sup>st</sup>-28<sup>th</sup> May 2017 and the sample itself was a convenience one. Interviewers working for the small Stockholm based consultancy Atteryd-Helaman, spent on average 25 minutes per interview speaking to shoppers about their views on transparency and Swedish forestry. The response rate was over 85 per cent helped by the fact that Smaland that week had sunny weather with temperatures around 25c. As Vaxjo is a university town the sample was heavily skewed towards students. Of those interviewed 45 per cent were in the 18-28 years age group and only 19 per cent were over the age of 67. It was also a well-educated group. Thirty four per cent had a minimum of an undergraduate degree, while another 22 per cent were studying for an undergraduate degree. Fifty-nine per cent of the respondents



were women. The questionnaire was designed and pretested by the author as was the analysis (conducted in excel) done after completion.

## **5. Findings**

So how did the various actors involved with Swedish forestry view the addition of forest maps to the Agency's Forest Data webportal? First of all the legal case between Sodra and the Forest Agency that began in 2016 is examined. It begun just as this study was started and hence the case could have affected the views of the actors interviewed.

### **5.1 The Sodra-Swedish Forest Agency legal case**

When the Agency added the map function to its Forest Data web portal in 2016, it was accused by Forest owners associations for not consulting individual forest owners (Svensson 2016). In addition, forest owners were not informed that some of their personal information was now available online for anyone to look at (e.g. names of forest parcels, with maps indicating where exactly the planned clear cut will take place) (Svensson 2016). As a result, some were rather surprised when the Swedish Society for Nature Conservation (SSNC) were able in two cases to block clear cuts from happening in the province of Smaland, by stating that the two areas in question had key micro environmental biotopes (Andre 2017; Smalandsposten 2016). As the head of the Swedish Farmers Union for the southeast region of Sweden noted at the time:

“The Society for Nature Conservation has become something like a police force working for the Forest Agency as it systematically looks for key micro biotopes in areas that have been submitted for clear cutting.” (Lars-Ove Johansson 2016; quote taken from Smalandsposten 2016)

At which time Jerker Bergdahl of the Forest Agency's offices in Vaxjo defended SSNC's actions:

“It is good that they are engaged as they provide new knowledge. They have without a doubt found new areas that have high environmental values.” (Bergdahl 2016; quote taken from Smalandsposten 2016).

This concerned all of Sweden's large forest owner cooperatives (Hammar et al 2016; Larsson and Berg 2016). Following a meeting in Stockholm in July 2016 it was decided that Sodra, Sweden's largest forest cooperative which represents 50,000 forest owners in southern Sweden and which operates three large pulp mills and a sizeable saw mill operation, would assist one of its affected members with a legal challenge against the Forest Agency (Svensson 2016). The legal challenge focused on why the Forest Agency needed to put maps of the clear cut applications in the public domain as it would threaten the forest owner's personal integrity/privacy (Delphi 2016; Sodra 2016; Svensson 2016). Sodra's representatives did not think that it was in the public's interest as a whole whether a forest owner does a clear cut or not. Rather they took the opposite view as they were concerned that it could cause unwanted curiosity,

jealousy, and even anger (Hammar et al 2016; Larsson and Berg 2016). The Forest Agency replied that it was not legally possible to challenge this decision (Andre 2016a and b). In a letter to Sodra in which the Agency explained why it would continue to put the information on the publically available web site, the Forest Agency's head of unit, Patrick Andre, noted:

“As logging operations are not covered by expressed permission or ability to appeal strengthens in our view the need for openness. The regulations governing the forest sector is based on trust that the forest owner would take care of his/her forest in the best possible way. The view of the Forest Agency is that openness is an important method to create trust and is closely tied with ‘freedom with responsibility’.” (Andre 2016b)

The issue that then needs to be addressed is whether or not the Agency was justified from a transparency perspective to put these digital maps on line. Andre (2016a and b) took the position that the Agency was only keeping up with the advances in electronic and digital publishing and did not see how publishing forest maps on the Forest data web portal would harm anyone. Sodra's legal representatives took the exact opposite perspective. In December 2016 a forest owner and member of the Sodra cooperative started legal proceedings against the Forest Agency regarding its stance that the decision could not be legally challenged via Sodra's Stockholm based legal representatives, Delphi. In September 2017, the District Court of Jonkoping ruled that the forest owner was allowed to legally challenge the Agency's decision (Forvaltningsratten I Jonkoping 2017). The Agency appealed this ruling (Swedish Forest Agency 2017) and the issue went back to the courts. On the 12<sup>th</sup> March 2018 Kammarratten in Jonkoping decided that the Agency could continue publishing these forest maps on the data portal as the court felt that the interest of the Agency's website user to examine the publically available information was more significant than the possible threat to the forest owner's personal integrity/privacy (Swedish Forest Agency 2018). Sodra's member has decided not to appeal this decision.

## **5.2 Transparency, forestry and the environmental NGOs**

The Swedish Society for Nature Conservation (SSNC) welcomed the Agency's new transparency measure. As one senior SSNC official noted:

This is part of the wider transparency agenda and it should always be welcomed as it builds public trust. We like what the Forest Agency is doing in this area and we think that the flak the Agency is getting is wrong and counterproductive. It is also a very useful tool.” (SSNC official February 2017)

It is clear why the SSNC was supportive of this transparency measure. In the fall of 2014 when SSNC members identified nests of large predatory birds in forest plots that were to be clear cut, the NGO decided to more systematically

use the Forest Agency's notifications of clear cuts as a way to identify key environmental biotopes for protection (Darell 2016). To gain further expertise in this area, in 2015 the SSNC started a course on identifying signal species (such as specialist mosses and lichens that need protection) in Smaland in which 25 individuals participated and this course was repeated in 2016. As 60,000 clear cuts applications are made a year, members of the SSNC admitted that they must prioritize and therefore primarily focus on areas such as boggy woods which would have been less affected by modern day forest harvesting practices (Marand 2016). When members find an interesting area, they have to inspect the forest plot with some urgency, as at times, they only have days before the area is clear cut. When they have completed the investigation they send a summary of their results to the Forest Agency, the forest company wanting to conduct the clear cut, and the county council. As Per Darell from SSNC notes:

“In the first instance it is not about contacting the forest owner. We are not a government agency. Often when we are doing the investigation we don't know who owns the forest in question.” (Darell 2016; quote taken from Smalandsposten 2016)

SSNC has over time worked on perfecting which types of the submitted forest plots should undergo further environmental examination. An example of SSNC's successes was when an active member of SSNC won the “Hack for Sweden Award” in 2017 for using data from the Swedish Forest Agency and other sources. As the individual noted:

“One can stop certain clear cuts from happening. It was bird watchers in Kronoberg's county who were sick of clear cuts. We started using the same methods as the Forest Agency, began mapping key environmental biotopes to see which forest plots were worth protecting. It is not forest but lumber plantations. One cuts down the forests and replaces it with something that is not so nice to have a picnic in.” (Frick 2017)

It seems clear that these new transparency measures will assist this and likeminded NGOs whose goal is to protect 20 percent of Sweden's forests to secure forest biodiversity (SSNC 2011; Tas 2016). As the vice president of SSNC once noted:

“The Swedish forestry model is in reality contributing to growing monoculture in the forests, with clear cutting as the default method, soil scarification and the use of non-native species...there has to be a stop to the destruction of the natural forests in Sweden.” (Astrom 2011; quote taken from SSNC 2011)

### **5.3. The Forest Agency and the Forest Agency's board members**

The Forest Agency officials as well as the Agency's board members were unanimous that the transparency measures were only beneficial. As one board member noted:

“They are exaggerating things. Sodra should not focus on this as it is not a big deal. Swedish forest owners should not be embarrassed for cutting down trees. The Field Biologists or Save the Forest NGOs do not have the time to police the forest owners nor check their clear cut maps.” (Board member February 2017)

Another board member noted:

“We are all part of the same planet and we should care about the environment. Agency officials are busy and at times can miss certain key environmental values within the areas that have been slated for clear cutting. In such circumstances the environmental NGOs will be able to help the Forest Agency. In addition the forest owners themselves need to be careful. A majority of the Swedish public are opposed to clear cutting and if they start attacking the Forest Agency over this digitalization process it can lead to the public questioning the clear cut process in general. Sodra is far too aggressive on this question.” (Board member February 2017).

Officials at the Forest Agency took the same view. As one individual noted:

“This isn’t a big deal. One has been able to get a hold of these clear cut requests off the web since 2007. They were put in place after the storm Gudrun blew down thousands of hectares in 2005 and was seen as a way to help the sellers of forest saplings to double check that they have delivered the saplings to the right forest parcel. It only blew up in 2016 after we put out a press release in which we noted how the digitalization of the clear cut requests were made clearer by the addition of the map function. Maybe we should have been more careful in the wording of this. That said the forest owners associations also need to be careful. They are too aggressive and there are too few communication specialists within senior management. We would prefer to have a dialogue with Sodra rather than this legal action.” (Swedish Forest Agency official, March 2017).

Another official noted:

“We live in an open and transparent era—placing these clear cuts applications with the map coordinates on our website is part of that process. The forest owners shouldn’t feel sorry for themselves as this will not help the reputation of the forest owners in the eyes of the public. They need to be careful, and they should remember that many Swedish forest companies are actually proud of what they are doing in terms of tree harvesting and putting loads of information on the internet. Conversations with the forest owning associations are always welcome and I feel that we have had too few of these over the last couple of years”. (Swedish Forest Agency Official, March 2017)

## 5.4 The views from the Swedish forest owners

The Swedish forest owners had a completely different view than the Swedish Forest Agency officials, or members of its Board. One individual noted:

“Great—now anyone can have access to what I plan to do clear cutting wise. This will create jealousy among my neighbours and what would happen if some environmentalist decides to punish me by putting out an endangered frog in my woods. I don’t see how this will help anyone. (Swedish forest owner, August 2017)

Another forest owner remarked:

“I don’t see an upside of doing this. Only negative. Forest owners should have the same rights as farmers in harvesting their grain. We owe tree farms and not nature reserves. Why are we treated in this way? I am happy that Sodra is pushing back on this issue.” (Swedish forest owner, August 2017).

A third forest owner noted:

“I don’t want any anti-forest NGOs running around my woods checking the nature value in my forest clear cut applications. It is if that neither they nor the Forest Agency actually trusts me. Here I am managing my forest holding to the best of my ability in a sustainable way with the help of a forest management plan carried out by a professional forester with both FSC and PEFC certificates. Isn’t that enough? Of course, these environmental NGOs want to preserve all of the trees in Sweden but they need to realize that we try our best. Why don’t they harass the Russians instead—they have loads of problems in taking care of their trees in a sustainable way. (Swedish forest owner, September 2017)

## 5.5 The Vaxjo public

How did the public view transparency in the forestry sector? In the first section of the questionnaire respondents were asked a number of general questions that gauged their views about transparency. The first question posed is shown in Table 1 below:

Table 1. Do you think it is good that politicians and public agencies and ministries are as transparent as possible?

	Yes	No	Don’t know
Vaxjo public	100%	0%	0%

In other words all Vaxjo respondents were pro transparency, something that has been seen in similar studies in other sectors (Bouder et al 2015; Lofstedt et al 2016; Way 2017). In today’s world transparency measures are seen to be a

good thing while the opposite secrecy is seen as bad (Black 1997; Heald 2006; Hood 2001). That said the majority of respondents took the view that too much transparency could be a bad thing. Following the initial question they were asked a battery of questions including whether they would welcome their tax returns to be put in the public domain (with 70% saying they would oppose this), to whether sport stars like Zlatan Ibrahimovic should be forced to post their medical records on-line (with 96% saying they would be against this) and whether the local mayor's possible driving mishaps should be made public (74% would oppose this). When asked why they were opposed to this information coming out, the most common responses were that the information was too private (97%), and that the facts were irrelevant and said very little about the person's character.

Table 2. For what reason(s) are you opposed to the release of private information into the public domain? You can select more than one answer.

	It is too private	These are irrelevant facts that say very little about the person's character	This information could be misused	This information would not do any good
Vaxjo public	97%	34%	1%	1%

In the second section of the questionnaire they were asked about their views about the transparency measures that the Forest Agency had implemented. The first two questions were general knowledge about the forest sector, with answers seen in Table 3.

Table 3. Have you heard of the Swedish Forest Agency?

	Yes	No	Don't know
Vaxjo public	47%	51%	2%

The second question is shown in Table 4, about how much trust the Vaxjo public have for the Swedish forest industry:

Table 4. How much trust do you have for the Swedish forest industry?

	Much	Little	Don't know
Vaxjo public	23%	15%	62%

As predicted, and in line with other Swedish surveys in the same area, most of the public in urban areas have little knowledge of either the Forest Agency or the Swedish forest industry as a whole (see also Bihl and Boman 2016; Eriksson 2012).

After these two initial questions seen in Tables 3 and 4 the following background statement was read out by the interviewer:

“The Swedish Forest Agency is a public agency that looks after the caring of Swedish forest in a way to help ensure that the goals of Swedish forest policy are reached. Recently the Forest Agency decided to put out information on the internet regarding the exact locations where forest owners are planning to do a clear cut.” (at this stage the respondents were shown an example of a forest map as well as a picture of a clear cut).

“The reasons for the Agency to do this are to make its work easier but also to help forest companies, energy companies, environmental NGOs and other bodies to get easy access to this information about planned clear cuts. The Agency also takes the view that increased transparency will lead to higher levels of public trust in as well as more knowledge about the Swedish forest sector.”

After this statement was read out respondents were asked this question, shown in Table 5:

Table 5. Do you think what the Forest Agency is doing in this area is good or bad?

	Good	Bad	Don't know
Vaxjo public	76%	7%	17%

When the respondents were asked why (shown in Table 6) the following answers were given:

Table 6. Why do you think this?

Will be a way to protect the environment	22%
Gives us understanding of that forest owners are doing	19%
Gives us a better overview	18%
Helps to protect the forest	6%
We will get more information	4%

Then separate questions were asked on whether these measures would fulfill the Forest Agency's aims, shown in Table 7.



Table 7. Battery of questions asked to Vaxjo respondents on whether measures would fulfill the Forest Agency's aims.

	Yes	No	Don't know
Will increased transparency in the forest sector increase your trust of both the Forest Agency as well as the Swedish forest sector as a whole?	62%	15%	23%
Will the transparency measures with regard to putting maps of proposed clear cuts in the public domain simplify the work of the Forest Agency?	44%	18%	38%
Do you think that by making these forest maps public that this violates the Swedish Forest owner's privacy?	22%	53%	23%
Will placing these forest maps in the public domain help energy companies, environmental NGOs and other bodies?	84%	4%	12%
Do you think that by placing these maps in the public domain that this information could be used against the forest owner in any possible way?	74%	3%	23%
Do you think that by placing these maps in the public domain that this will help the forest owner or the forest sector as a whole?	37%	25%	38%

As seen from these answers in Table 7 a majority of the respondents interviewed agree with the Swedish Forest Agency that putting these maps in

the public domain is a good thing. They believe that it will help to protect the environment and increase trust in both the Agency and the forest sector as a whole. They agree that it will make the Agency's job easier and that it does not violate the forest owner's privacy. They do take the view, widely shared by the forest owners themselves as well as Sodra (e.g. Svensson 2016), however, that putting these maps in the public domain could be used against the forest owners in some way and that it is actually unclear how these publically available maps can help the forest owners or the forest sector as a whole.

## **6. Discussion**

The call for greater transparency and wider openness is a part of a global mega trend (Sharfstein et al 2017). After all, transparency is associated with highly positive associations so who could be opposed to enhancing transparency? Indeed, all the interviewees in the Vaxjo general public sample were pro-transparency and a majority supported the Agency's stance of putting information of the exact areas that have been requested to be clear cut in the public domain. But is it that simple? There are several issues that need to be addressed.

### **6.1 Is it likely that these transparency measures will lead to greater public trust in the forest sector *per se*?**

One of the reasons for putting this information in the public domain was to build public trust. The opinion that it should build trust was supported by the interview findings with both the Vaxjo public as well as the Forest Agency/Board members. To be clear the commercial Swedish Forest sector at present could do with higher levels of public trust (see, for example, the critical discussion put forward by Zaremba 2012) so would benefit from more trust as the Agency rightly points out (Andre 2016a and b). Will this actually happen?

There are three main reasons why public trust levels are unlikely to change. Firstly, most of the non-forest owning Swedish public favour the environmental and recreational values that forests bring rather than economically oriented ones (Eriksson et al 2013). Similarly, young Swedish adults living in large cities are unfamiliar with forests and are unable to describe what the term "forest" actually means (Bihl and Boman 2016). It is highly unlikely that these same Swedes would favour clear cuts, as this inevitably leads to less environmental and recreational space (Zaremba 2012), an issue highlighted by one of the Forest Agency's board members. In other words, greater transparency with regard to making public clear cut requests will most likely decrease the public's trust in the forestry sector, something that has already been observed in other areas (Beijker et al 2009). Secondly, the ongoing legal dispute between Sodra and the Forest Agency, which has been covered by local and some national medias, will most likely create greater public distrust of the commercial forestry sector

as a whole something that the Agency's board members alluded to earlier. Thirdly, empowered NGOs are not known for helping to create greater public trust in government agencies (Lofstedt 2005; O'Neil 2006). In other areas, where NGOs have gained information because of new transparency measures- such as in the pharmaceutical and food sectors- many NGOs have tried to decrease the public trust of the Agencies in charge of these areas (EFSA, EMA) as a way to increase their power (for an in-depth discussion see Way 2017; Way and Lofstedt 2018). Therefore, in the medium term, it is highly unlikely that the Forest Agency will continue to welcome the activities of the environmental NGOs, as they will most likely put increasing pressure on the various actors in the forest sector including regulators.

### **6.2 Will these transparency measures assist the Environmental NGOs?**

Although several members of the Forest Agency's board denied that these transparency measures would assist the environmental NGOs, most of which are opposed to clear cuts, the opposite is the case. As discussed earlier, the SSNC is highly active in this area and its members are targeting forest plots that have been submitted for clear cuts with possible high environmental values (Smalandsposten 2016). Indeed, the NGOs themselves admit that they have benefitted from having these maps in the public domain (Frick 2017).

### **6.3. Will these new enhanced transparency measures benefit anyone else?**

It is unclear whether these new enhanced transparency measures will benefit forest companies, energy companies or other bodies. These organizations already have access to this information in a private capacity and do not need the enhanced map that is available in the public domain. As one Sodra forest inspector noted:

“Forestry in Sweden is very much integrated today. We work with other members of the forest supply chain, be it sapling distributors, clear cut entrepreneurs, brush removers or diesel providers. In such cases we send over the digitized forest maps with clear instructions of what needs to be done and where. This is done in a private capacity on a need to know basis. We do not share this information on publically available websites, and frankly aside if you are a neighbor to the forest owner doing the clear cut in question or a critical NGO I don't see how further enhanced transparency measures are beneficial to anyone.” (Sodra forest inspector, August 2017).

## **7. What should we do now going forward?**

The Swedish forest sector has over the past forty years been highly economically successful, with the country over time becoming one of the largest pulp and paper producers in the world (Jansson et al 2011; Pettersson 2005; Swedish Forest Industries Federation 2014). In so doing the sector has

consistently been one of the country's biggest export earners but this has come at a price. Large parts of Sweden have been turned into tree plantations and studies indicate that 92 per cent of Swedish forests have already at some time been clear cut (Erlandsson 2012). The rapid urbanization of Sweden has led to the average Swede losing touch with forestry, countryside and nature (Bihl and Boman 2016). Yet, had the Swedish public been more aware of how commercial forestry actually functions with clear cuts followed by tree plantations, it is unlikely that they would have been supportive of the modern Swedish forestry model. This is something that officials at the Swedish Forest Agency and members of its Board highlighted in the interviews discussed in this study. They take the view that greater transparency will lead to more trust in the forestry sector overall. However, based on the broader scientific literature on past transparency efforts the opposite is likely to occur (e.g. Boudier et al 2015; Lofstedt and Boudier 2014). This means it is likely that greater transparency coupled with more knowledge of modern forestry practices (such as clear cutting) will lead to greater distrust of the Swedish forestry model. As a result, the author would suggest the following recommendations going forward:

### **7.1 Find out how the Swedish public views forestry, clear cuts and the Swedish forest model as a whole**

In a confidential study conducted by the consultancy Swedish Forest Communication, the consultants found that young Swedish adults living in cities had low knowledge of what the term forest means, as well as what forests do in terms of their links in combatting climate change, and what wood products actually come from. This is worrying. What is needed now is to conduct a proper peer reviewed study to explore the knowledge base of the Swedes with regard to forestry. What do Swedes really understand about forests and forestry? Do they know how Sweden's forests are managed? Do they like clear cuts or are they opposed to them? Such a study should be conducted by an independent expert in close collaboration with the Forest Agency and the Swedish forest industries.

### **7.2 Uncover how Forest owners view forest management and the Forest Agency**

One of the reasons why there is a legal challenge between Sodra and the Forest Agency, is that it appears that Agency officials were not fully aware of how forest owners either viewed their management of their forest or their views on the Agency's call for greater (and more digitalized) transparency. There appears to be a communication breakdown between the forest owners and the Agency itself. To address this lack of knowledge as well as a lack of dialogue, one of Sweden's research foundations need to fund two projects with some urgency before trust between the forest owners and the Agency breaks down completely, namely: a) a qualitative in-depth face to face study of some 50

forest owners focusing on the following: 1) their understanding of the purpose of the Agency; 2) their view on whether the Agency overall is doing a good or a bad job; 3) their take on the various transparency measures introduced by the Agency; and 4) their view on what it means to be an active forest manager. Some knowledge was gained of how forest owners view the Agency based on the interviews discussed in this paper but this needs to be supported by a more in-depth study. Once the in-depth study has been finished, the results from that project should feed into a larger quantitative (online) survey with more than 1000 Swedish forest owners. Conducting such a study is important for ensuring that the Agency and forest owners, who are, of course, key actors in the Swedish forestry sector, maintain trust and good dialogue well into the future. Losing trust is difficult to regain and working on building trust between these two entities would be more than worthwhile (Slovic 1993).

### **7.3 Develop an information brochure/pack on Swedish forestry practice**

Based on the outcomes of the previous recommendations there will be a need to develop an interactive information package (social media, local media, snap chats, Instagram etc) on what are the benefits of the Swedish forestry model for Sweden and society as a whole. Ideally these information packs should be developed for adults of all ages but also for school children such as via the excellent initiative skogen I skolan ([www.skogeniskolan.se](http://www.skogeniskolan.se)). If the Agency is really serious about increasing trust by becoming more transparent, then a starting point will be to communicate more about the Agency and what it does and who it is. If they do not do this then Swedes, many of who have never heard of the Agency, may become confused now that the transparency policy has been launched as to why they are allowing clear cuts to take place in certain areas. Transparency is not easy and is expensive. Transparency is not just making data more available but requires, in this case, that the Swedish public can receive, digest and use that data (Heald 2006) otherwise trust is highly unlikely to be built (Way 2017). Going forward, the Agency and other forest organizations, working in close collaboration with communication experts, should hold open days and ideally there should be dedicated stands discussing the advantages of the Swedish forestry model at summer fun fares (such as Liseberg) and outdoor museums (Skansen).

### **7.4 Developing more nuanced transparency strategies**

It would be beneficial if the Swedish Forest Agency empirically tested whether placing clear cut applications with maps on its publically available Forest Data web portal actually leads to more public trust as well as greater public understanding of the Swedish commercial forestry model. The Swedish Forest Agency should conduct such an empirical evaluation together with a neutral third-party expert who has a clear understanding of communication practices as has been recommended elsewhere (eg Fischhoff et al 2011). If the clear cut

applications on its Forest Data web portal does not lead to more public trust or greater public knowledge the portal should be either scrapped or reconfigured.

### **7.5 Train forest owners to be able to spot key nature biotopes.**

One of the reasons why SSNC and other NGOs are exploring forests looking for key nature biotopes is because it appears that forest owners themselves are not doing so, which is something that representatives at the Forest Agency have also alluded to in this study. It is not in the interest to an individual forest owner to be surprised when one of his/her planned clear cuts is halted at the very last minute because a NGO has, for example, found an endangered species (e.g. a rare lichen) in the area. To get around this issue the Forest Agency should highlight in more detail (maybe via social media) the training courses it has set up to do just that, so that interested forest owners so that they too will be able to uncover key environmental biotopes at an earlier stage. In so doing, the forest owners will then be able to reassess their forest management strategy of the forest parcel itself going forward. This could include, for example, having a dialogue with the Forest Agency about receiving a government subsidy in order to ensure that the forest plot is protected from future clear cutting.

### **7.6 Hire more expert social scientists**

Government department and industry organizations do not have a tendency to hire many social scientists. That is one reason that there are communication breakdowns between organizations, and is often why Agencies are incapable of solving alarms such as with acrylamide (Lofstedt 2003; 2017) or radon (Lofstedt 2018) even though social scientists have spent much time researching such topics. To get around this issue Agencies, industrial bodies and other organizations should make a concentrated effort to hire more social scientists. The forest sector as a whole is known to be dominated by individuals who have studied silviculture at university including such topics as biology, economics and technical issues and then graduating as Skogsmastare or Jagmastare rather than coming from a softer social science background. Had the Forest Agency had more social scientists at hand, maybe it would have been able to test whether the Forest Data web portal actually led to increased public trust and knowledge.

## **8 Conclusions**

In this study we found that a majority of the Forest Agency's board members and senior executives were in favour of the Agency's transparency measures, something that a majority of the public interviewed also agreed with. Forest owners, however, had exactly the opposite view something that has been discussed in the literature previously (Eriksson 2012). That said, it is unclear whether the recently improved transparency measures will actually lead to greater public trust and knowledge of the Swedish forestry model. As most

Swedes are unaware of how the Swedish forestry production model actually works, they will most likely be opposed to clear cuts if they found out that this was the main method for harvesting mature tree stands. Hence, the Agency's transparency measures may actually decrease public trust in the forestry sector rather than anything else.

## **9 Declaration of interest:**

Ragnar Lofstedt is a member of Sodra forest cooperative and owns 347 hectares of productive forest in Smaland, Sweden. He owns shares in Sodra and sells his pulp and saw wood logs to Sodra.

## **10 Acknowledgements:**

In conducting this research, materials, assistance and advice were provided by Sodra and the Swedish Forest Agency. I am grateful to the following individuals who have either provided me with materials or who have commented on earlier drafts of this paper: Patrik Andre, Asa Boholm, Katarina Eckerberg, Goran Ohrlander, Ullrika Sahlin, Marcus Svensson and Dominic Way. This research was in part supported by a grant from the Sodra Foundation and in part by the Swedish Research Foundation FORMAS, via the University of Gothenburg, where the author is a visiting professor.

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